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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ROSSI, JESSICA	

ART UNIT	PAPER NUMBER
1733	10

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/852,788	BAUMANN ET AL.
	Examiner	Art Unit
	Jessica L. Rossi	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *16 and 17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 18-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-15 and 18-22, drawn to a method for producing an insulated stator winding, classified in class 156, subclass 52.

II. Claims 16-17, drawn to a shrink-on sleeve, classified in class 310, subclass 254.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instance case, the shrink-on sleeve could be used in a variety of processes requiring shrinking of a sleeve having a rectangular cross-section onto an object, thereby placing serious burden on the examiner. For example, the shrink-on sleeve could be a plastic shrink-on sleeve that is used to encase packages/containers (please refer to US Patent 6,129,938; note shrink sleeve 16 having a rectangular cross-section).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Killian on 1/14/03 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-15 and 18-22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-17 are

withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. Applicants indicated that a new abstract was attached to Supplemental Preliminary Amendment C, filed 1/17/02; however, no abstract can be found in this amendment. Applicants are advised to resubmit the abstract in a subsequent amendment.

Claim Objections

7. Claim 22 is objected to because of the following informalities: "on" should be --one-- after "least" in line 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2-4, 15, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, it recites the limitation "the outer periphery" in line 4. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change "the" to --an--.

Regarding claim 15, it recites the limitation "the plurality of conductor bars" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change this to --the plurality of individual conductors--. (see claim 13 from which it depends)

Regarding claim 19, it is unclear as to how the support sleeve is removed by a helical opening in itself. Do Applicants mean that it is removed by a helical opening in the shrink-sleeve (see p. 6, [0016])? Applicants are asked to clarify.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-3, 5-6, 12-15, 18, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky (US 3497737) in view of the Admitted Prior Art in the specification of the present application and Nicolai (US 5859385).

With respect to claim 1, Philofsky, directed to producing an insulated stator winding 16 for a rotating electrical machine (column 1, line 27; column 2, lines 9-10), teaches applying an electrically insulating sheath 19 having a rectangular cross-section (Figure 2; column 3, lines 7-8) to a periphery of a rectangular conductor bar comprising a plurality of rectangular conductors

17 (Figure 2; column 2, lines 67-68). The reference is silent as to the sheath being shrunk onto the conductor bars.

It appears that Applicants teach it is known in the art to produce a stator winding by shrinking an insulating shrink sleeve onto a plurality of conductors as opposed to winding/wrapping the insulation onto the conductors, because the later process is time and cost intensive (p. 2, [0007]; p. 3, [0009]). It is also known in the art to insulate conductors by shrinking a shrink sleeve, also referred to as a shrink sheath, onto the conductors, as taught by Nicolai (column 1, lines 15-20).

Since a sheath is equivalent to a sleeve in the insulated conductor art, as taught by Nicolai, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the insulation sheath of Philofsky be in the form of a shrink sheath that is shrunk onto the conductor bar of Philofsky because such an insulation application technique is know in the art, as taught by the Admitted Prior Art, and it is less expensive and time-intensive than other prior art techniques and shrinking the sheath onto the conductor bar allows for a tight fight between the sheath and conductor bar.

Regarding claim 2, Philofsky is silent as to mechanically dilating the shrink-on sheath in its cold state and applying the sheath around an outer periphery of a support sleeve before the support sleeve is pulled over the conductor bar. It appears that Applicants teach it is known in the art to mechanically dilate a shrink-on sleeve in its cold state and apply the shrink on sleeve around an outer periphery of a support sleeve before the support sleeve is pulled over the conductor bar (p. 3-4, [0009]).

Since a sheath is equivalent to a sleeve in the insulated conductor art, as taught by Nicolai, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the sheath to the conductor bar of Philofsky in the manner claimed by Applicants because such is know in the art, as taught by the Admitted Prior Art, and one reading the Philofsky reference as a whole would have appreciated that no criticality is placed on how the sheath is applied to the conductor bar where only the expected results would have been achieved.

Regarding claim 3, Philofsky is silent as to removing the support sleeve. It appears Applicants teach it is known in the art to remove the support sleeve from between the shrink-on sleeve and the conductor bar after the support sleeve surrounded by the shrink-on sleeve has been applied to the conductor bar (p. 3, [0009]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the support sleeve as suggested by Applicants because such is known in the art, as taught by the Admitted Prior Art, where only the expected results of allowing the sleeve to shrink onto the conductor bar would have been achieved.

Regarding claim 5, Philofsky is silent as to the sheath being heat shrunk onto the conductor bar. It appears Applicants teach it is known in the art to produce a stator winding by heat-shrinking an insulating heat-shrink sleeve onto a plurality of conductors as opposed to winding/wrapping the insulation onto the conductors, because the later process is time and cost intensive (p. 2, [0007]; p. 3, [0009]). It is also known in the art to insulate conductors by heat-shrinking a heat-shrink sleeve, also referred to as a heat-shrink sheath, onto the conductors, as taught by Nicolai (column 1, lines 15-20).

Since a heat-shrink sheath is equivalent to a heat-shrink sleeve in the insulated conductor art, as taught by Nicolai, it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat-shrink the sheath of Philofsky onto the conductor bar because such is know in the art, as taught by the Admitted Prior Art, and one reading the Philofsky reference as a whole would have appreciated that no criticality is placed on how the sheath is applied to the conductor bar where only the expected results would have been achieved.

Regarding claim 6, Philofsky is silent as to dilating the sheath with compressed air and pulling the sheath in a cold state over the conductor bar. Selection of a particular method for dilating the sheath would have been within purview of the skilled artisan at the time the invention was made absent any unexpected results. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pull the sheath in a cold state over the conductor bar because it appears that Applicants teach that such is known in the art (p. 3 [0009]) as discussed above in reference to present claim 2.

Regarding claim 12, Philofsky is silent as to the conductor bar and shrunk sleeve being bent with a bending device into a shape suitable for a stator. It would have been obvious to one of ordinary skill in the art at the time the invention was made to bend the conductor bar having the sheath thereon into a suitable stator configuration because it appears Applicants teach such being known in the art (p. 4, [0010]), wherein such bending is necessary to produce the desired shaped stator.

Regarding claim 13, Philofsky teaches the conductor bar comprising individual conductors 17 (Figure 2).

Regarding claim 14, Philofsky is silent as to temporarily connecting the individual conductors. It would have been obvious to one of ordinary skill in the art at the time the invention was made to temporarily connect the conductors because this would prevent them from moving around during shrinking of the sheath.

Regarding claim 15, Philofsky is silent as to the conductors not being Roebel-transposed in the area of an involute. It appears Applicants teach it is known in the art to use conductors in a Roebel-transposed arrangement of a non-Roebel-transposed arrangement (p. 2, [0005]). Selection of either arrangement would have been within purview of the skilled artisan at the time the invention was made absent any unexpected results.

Regarding claim 18, Philofsky is silent as to the dynamoelectric machine being a direct or alternating current machine. However, the skilled artisan would have readily appreciated that dynamoelectric machines can be either direct or alternating current machines.

Regarding claim 21, Philofsky teaches the conductors having a rectangular cross-section (Figure 2).

12. Claims 7-9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the Admitted Prior Art, and Nicolai as applied to claim 1 above, and further in view of Mohebban et al. (US 4589939).

Regarding claims 7 and 9, Philofsky is silent as to the sheath being made of a plurality of radially superimposed layers each having different properties. It would have been obvious to one of ordinary skill in the art to use a sheath having a plurality of radially superimposed layers with different properties because such is known in the art, as taught by Mohebban (column 2, lines 61-65), where this allows for manipulation of the properties of the sleeve.

Regarding claim 8, Philofsky is silent as to how the sheath is made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to co-extrude the sheath because such is known in the art, as taught by Mohebban (column 2, lines 55-56), and this allows for continuous production of the sheath.

Regarding claim 22, Mohebban teaches one of the layers being the main insulation (column 6, lines 62-65).

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the Admitted Prior Art, and Nicolai as applied to claim 1 above, and further in view of Dienes (US 3946480).

Regarding claim 10, Philofsky is silent as to providing adhesive between the sheath and conductor bar. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply adhesive to the inside of the sheath or the outside of the conductor bar because such is known in the art, as taught by Dienes (column 5, line 64 – column 6, line 1), where this would ensure a good bond between the same. Selection of a particular adhesive would have been within purview of the skilled artisan depending on the desired characteristics.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the Admitted Prior Art, and Nicolai as applied to claim 1 above, and further in view of Vallauri et al. (US 5985062).

Regarding claim 11, Philofsky is silent as to the sheath being an extruded elastomer. Selection of a particular material for the sheath would have been within purview of the skilled artisan at the time the invention was made depending on the desired characteristics thereof.

However, it is known in the art to make insulation sheaths/sleeves from extruded elastomeric material, as taught by Vallauri (column 3, lines 20-21 and 47-51).

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the Admitted Prior Art, and Nicolai as applied to claim 3 above, and further in view of Krackeler et al. (US 4585607).

Regarding claim 19, Philofsky is silent as to the support sleeve being removed by a helical opening. Removal of the support sleeve would have been dependent on the structure of the support sleeve. However, it is known in the art to remove a support sleeve by means of a helical opening in the support sleeve, as taught by Krackeler (Figure 5; column 1, lines 10-11; column 2, lines 31-32 and 41).

Allowable Subject Matter

16. Claims 4 and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claim 4, the prior art fails to teach or suggest producing an insulated stator winding comprising applying a shrink-on sleeve around a support sleeve, applying the support sleeve surrounded by the shrink-on sleeve onto the conductor, and melting the support sleeve.

Regarding claim 20, it is dependent on claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **703-305-5419**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jessica L. Rossi
Patent Examiner
Art Unit 1733

jlr
February 26, 2003

Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700